SPECIAL EDITION

ENTRAPASS™

Architectural and Engineering
Specifications

Access Control
and
Integrated Systems

KANTECH™

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PART I  GENERAL

1.1 GENERAL DESCRIPTION

The Security Management System (SMS) shall be a modular secure access management system used to better control employee and visitor movements at various establishments. The SMS shall be designed to maximize all tools offered by the Windows platform. All commands shall be accessible using only a mouse, and keyboard use shall be limited to documenting fields requiring numeric or alphanumeric data.

The operating program shall be capable of running on a non-proprietary CPU. The application software shall be based on a standard, high level programming language. The SMS shall be modular to facilitate its installation and the development of its capabilities while avoiding major modifications in its operation and in saving all defined system and historical data.

The workstation shall be the main user interface to perform supervisory and programming functions. The workstation shall include a Paradox database. All database management tools shall be included, such as back-up, indexing, and database cleaning tools. No third party database tools or licensing shall be required.

The SMS shall enable the selection of at least two user languages. The basic dictionary shall include English, French, Spanish, Italian and German. However, the system shall include a vocabulary editor to be used in designing custom language dictionaries. The operator's profile shall permit the integration of one of the two languages.

The SMS shall include RS-232 / RS-485 communication link between the various system components as well as TCP/IP network interface capability. Field devices such as card readers, alarm inputs, control points, etc. shall be connected to fully distributed intelligent field panels capable of operating without host computer intervention.

The SMS shall be able to design customized ID cards directly from the access management software. No specific program or software other than the access management software and no additional licensing shall be required for this function. Badging shall be fully integrated with the card database.

1.2 SUBMITTALS

1.2.A Shop Drawings

Prior to assembling or installing the SMS, the Contractor shall provide complete shop drawings which include the following:

1. Architectural floor plans indicating all system device locations.
2. Full schematic wiring information for all devices. Wiring information shall include cable type, cable length, conductor routings, quantities, and point-to-point termination schedules.
3. Complete access control system one-line block diagram.
4. Statement of the system sequence of operation.
5. Riser diagrams showing interconnections.
6. Detail drawings showing installation and mounting.
7. Fabrication drawings for console arrangements and equipment layout. All drawings shall be fully dimensioned and prepared in DWG format using AutoCAD.

1.2.B Product Data

Prior to assembling or installing the SMS, the Contractor shall provide the following:

1. Complete product data and technical specification data sheets that includes manufacturer’s data for all material and equipment, including terminal devices, local processors, computer equipment, access cards, and any other equipment provided as part of the SMS.

2. A system description, including analysis and calculations used in sizing equipment required by the SMS. The description shall show how the equipment shall operate as a system to meet the performance requirements of the SMS. The following information shall be supplied as a minimum:
   a. Central processor configuration and memory size
   b. Description of site equipment and its configuration
   c. Protocol description
   d. Hard disk system size and configuration
   e. Backup/archive system size and configuration
   f. Start up operations
   g. System expansion capability and method of implementation
   h. System power requirements and UPS sizing
   i. A description of the operating system and application software.

1.2.C As-Built Drawings

At the conclusion of the project, the Contractor shall provide “as built” drawings. The “as built” drawings shall be a continuation of the Contractor’s shop drawings as modified, augmented, and reviewed during the installation, check out and acceptance phases of the project. All drawings shall be fully dimensioned and prepared in DWG format using AutoCAD.

1.2.D Manuals

At the conclusion of the project, the Contractor shall provide copies of the manuals as described herein. Each manual’s contents shall be identified on the cover. The manual shall include names, addresses, and telephone numbers of each security system integrator installing equipment and systems and the nearest service representatives for each item of equipment for each system. The manuals shall have a table of contents and labeled sections. The manuals shall include all modifications made during installation, checkout, and acceptance. The manuals shall contain the following:

1. Functional Design Manual

The functional design manual shall identify the operational requirements for the system and explain the theory of operation, design philosophy, and specific functions. A description of hardware and software functions, interfaces, and requirements shall be included for all system operating modes.
2. Hardware Manual

The hardware manual shall describe all equipment furnished including:

   a. General description and specifications
   b. Installation and check out procedures
   c. Equipment layout and electrical schematics to the component level
   d. System layout drawings and schematics
   e. Alignment and calibration procedures
   f. Manufacturers repair parts list indicating sources of supply


The software manual shall describe the functions of all software and shall include all other information necessary to enable proper loading, testing, and operation. The manual shall include:

   a. Definition of terms and functions
   b. Use of system and applications software
   c. Initialization, start up, and shut down
   d. Alarm reports
   e. Reports generation
   f. Database format and data entry requirements
   g. Directory of all disk files


The operator’s manual shall fully explain all procedures and instructions for the operation of the system including:

   a. Computers and peripherals
   b. System start up and shut down procedures
   c. Use of system, command, and applications software
   d. Recovery and restart procedures
   e. Graphic alarm presentation
   f. Use of report generator and generation of reports
   g. Data entry
   h. Operator commands
   i. Alarm messages and reprinting formats
   j. System access requirements


The maintenance manual shall include descriptions of maintenance for all equipment including inspection, periodic preventive maintenance, fault diagnosis, and repair or replacement of defective components.

1.3 QUALITY ASSURANCE

1.3.A Manufacturer Qualifications

The manufacturers of all hardware and software components employed in the SMS shall be established vendors to the access control/security monitoring industry for no less than
five (5) years and shall have successfully implemented at least 5 systems of similar size and complexity.

1.3.B Contractor / Integrator Qualifications

1. The security system integrator shall have been regularly engaged in the installation and maintenance of integrated access control systems and have a proven track record with similar systems of the same size, scope, and complexity.

2. The security system integrator shall provide a minimum of three (3) references whose systems are of similar complexity and have been installed and maintained by the security system integrator in the last five (5) years.

3. There shall be a local representative and factory authorized local service organization that shall carry a complete stock of parts and provide maintenance for these systems.

1.3.C Testing Agencies

1. The SMS shall be tested and listed by Underwriters Laboratories (UL) for UL 294 for Access Control System Units

2. The SMS hardware shall comply with the following regulatory requirements:
   a. FCC Part 15 Class A
   b. FCC Part 15 Class B
   c. FCC Part 68 (TIA968)
   d. ICES-003
   e. CE
   f. ECCN for AES 128 bit encryption for IP communication
   g. Government standards NISPOM 5-313 Automated Access Control Systems, DICD Annex F 2.3 Accept/Reject Threshold Criteria, JAFAN Annex D 2.3 Accept/Reject Threshold Criteria

3. The SMS shall support Americans with Disabilities Act (ADA) compliance in door and access operation.

1.4 WARRANTY

The Security Management System (SMS) shall be provided with a 12 month product warranty from date of registration. Software version updates shall be available for no charge during this warranty. The software media warranty shall be 90 days.
PART II  PRODUCTS

2.1 MANUFACTURERS

The Security Management System (SMS) shall be the Kantech EntraPass Special Edition.

2.2 DESCRIPTION

The Security Management System (SMS) shall be an integrated system that utilizes a Paradox database for the storage and manipulation of related data. The SMS shall include an operator and administrator workstation with appropriate software, hard copy printers and fixed magnetic storage media. The security field devices (readers, door position switches, REX, etc) shall communicate with the field panels via a dedicated cable network. The field panels shall communicate to the server via a Fast Ethernet 10/100, TCP/IP network, RS 232/RS 485 connection, or dial up modem.

The SMS shall be modular in nature, allowing system capacities to be easily expanded without requiring major changes to system operation. All defined system data as well as historical information shall be maintained. Customizable user interfaces shall allow management of system information and activity for administrators and operators. The response time between the moment when a card is presented at the reader and when the door is unlocked shall not exceed one second. The SMS shall include a badging solution with a GUI for badge design. No extra licensing shall be required for the badging solution.

The SMS shall support up to:

1  Workstations
64  Door controllers
256  Card readers and/or keypads and/or elevator cabs
64  Elevator floors per cab
Unlimited  Access cards
Unlimited  Card families or site codes
16,834  Monitored points
16,834  Control relays
2  Simultaneous operator languages

2.3 PERFORMANCE - MONITORING

2.3.A Monitoring Mode

1. The SMS shall enable every operator to customize his/her desktop configuration. It shall be possible to modify the desktop appearance and to create up to four desktops and to associate up to ten different display screens to each. It shall be possible to modify the size and position of all screens. It shall be possible to determine if these screens shall be floating anywhere on the desktop or fixed on the desktop. If the workstation is equipped with a dual output video card and two or more monitors, it shall be possible to distribute the screen to multiple monitors. However, each screen shall be able to be viewed alone or together depending on operator needs. Once these parameters are saved, the configuration shall automatically take effect whenever the operator logs in.

For all types of screens, it shall be possible to access the general properties of the screen by simply right clicking at the center of the screen. From there it shall allow
for linkage between associated screens without having to exit the current screen or section. It shall be possible to right click events on the desktop for editing, which shall bring the user directly to the card, door, or component window and back.

2. Message Screen

All events that occur shall appear in real time. The text shall include at least the date, time, and a pertinent description of the event as well as its condition. The display of this screen shall be customizable and a different background and message color can be used for every type of event.

Every in-coming event shall be documented by one or more icons representing photos, access card, server, gateway, controller, card reader, and relay or supervision point. It shall be possible to classify the events on the screen by sequence, date and time, type of event, or type of message. In addition, a text filter shall be available to facilitate searching. It shall be possible to access the last up to 100,000 transactions from this window without the need to request a special report.

3. Card Holder Photo Screen

When a card is presented to a card reader, the software shall automatically display the photograph of the cardholder in this window. From this screen it shall be possible to select the cardholder’s name, card number, event text, and comments as well as specify a door or group of doors for which the operator would like to display a photo. The SMS shall support up to 4 pictures simultaneously.

4. Filtered Message Screen

This screen shall be a copy of the text messages screen except it shall be possible to select a specific message filter. The SMS shall include a choice of pre-configured filters and the ability to create customized filters. For every new filter it shall be possible to associate a name to it, select the type of event, select door, select supervision input, and select output.

5. Alarm Screen

Alarms that require an acknowledgement by an operator shall be displayed on this screen in text form only. The text shall include at least the date, time and description of the alarm, and its condition. It shall be possible to classify events on the screen by sequence, date and time, type of event, or type of message. A text filter shall be available in order to facilitate the search.

If instructions about an alarm are envisaged, they shall automatically appear in a second window on the screen. If a graphic is associated with the alarm, it shall appear automatically on the screen defined to this effect. The icon associated to the control point shall be represented and show the actual state of the point.

The operator shall be able to access a log book in order to document the alarm that occurred. Once this information is recorded in the log it shall not be erasable or modifiable.

2.3. B Graphics Screen

1. There are two options for graphics that appear as background on the screen. The first is a reproduction of the building(s) floor by floor. The graphic module shall be
capable of importing files in BMP, EMF, WMF, JPEG, GIF, PCX, PNG, TIF or PCD formats.

2. The second option is using web pages, or Webviews, as background on the screen. This can be used in the following manners:
   a. Accessing to DVR web servers
   b. Embedding default web pages into operator desktops
   c. Adding an IP camera onto a video view
   d. Embedding intranet pages or directories into the operator environment
   e. Adding Pdf, Word documents, etc. to the desktop
   f. HTML or Pdf pop-up instruction on alarm
   g. Integrating report folders in the desktop for quick access

3. For both options, control points shall be represented by a descriptive icon. Control points include controllers, card readers, doors equipped with either card readers or supervision contacts, relays, and input monitoring points such as motion sensors. The icons shall be animated, meaning they shall represent the state of the point to which they are associated in real time. Every graphic shall support at least 100 control points.

   Right clicking on an icon shall directly access the manual commands of each control point. A door shall be capable of but not limited to temporarily unlocking, manually unlocking or locking, and enabling or disabling a reader. A supervision point shall be capable of being enabled or disabled. A control relay shall be capable of being activated, deactivated, or temporarily activated.

2.3.C Communication Methods

1. The SMS shall ensure the communication to remote sites over a LAN or WAN/Internet using a dedicated communication server device, IP Link or the KT-400. It shall ensure secure communications by the use of 128-bit AES Encryption. It shall reduce bandwidth consumption by managing the communication protocol of Kantech controllers at the remote site. Polling of Kantech controllers shall be done by the IP Link or the KT-400 in the field and not over the network. The IP Link or KT-400 shall provide support for up to 32 door controllers. The IP Link or KT-400 shall be configured from the access software or from a web page which has the security feature of being disabled after successful use.

2. For sites that do not have network links, communication to remote sites shall be ensured by Dial-up modems. The SMS shall support up to 32 such modems that can simultaneously communicate and transmit and/or receive data from remote sites. No modem shall be dedicated to specific sites; communication shall be established such that the first site calling shall have access to the first available modem, and so on.

3. The SMS shall be capable of managing up to 32 local controllers per loop with the use of RS-232 or RS-485 protocols. In addition, it shall be able to use SERIAL, USB, or via Ethernet using TCP or UDP protocols to communicate with controllers.

4. In all communication methods, the door controller shall retain in their memory all necessary data for controlling doors that they supervise. In case of communication failure, the door controller shall execute all its functions normally. Controllers that work in degraded mode shall not be accepted.
2.4 PERFORMANCE – PROGRAMMING & CONFIGURATION

2.4.A User Section

1. This section shall include all functions involved in the issuance of an access or ID card as well as database search and importation tools. During the addition or modification of a card, information about the card shall be sent to the door controllers affected by these new parameters as soon as the operator accepts the addition or modification. An additional command requiring a reloading of the cards database in the door controllers shall not be acceptable.

2. The SMS shall enable the creation and definition of a user access card. Users can be managed by cardholder name or card number. When creating card users, the operator shall be able to select a card format directly from a Card dialog and enter the card number as it is printed on the card.

3. The following user information shall be able to be saved in the user section:

   a. Card number
   b. First and last name
   c. Additional information (10 fields)
   d. Start date
   e. Expiry date
   f. Personal ID number (PIN)
   g. State of the card
   h. Comments

   In addition, it shall be possible to associate a photograph, signature, and badge template to a card.

4. The SMS shall allow for the creation of an unlimited number of card templates to be used as ID cards. Template parameters include name, number of sides, and size. It shall be possible to directly print a template on an access card. The operator shall be able to design customized badging templates directly from the access management software. No specific badging program or software other than the latter and no additional licensing shall be required for this function. Based on the operator’s security level and workspace, they may be able of creating ID cards. The following items shall be capable of being added to and modified on a badge template:

   a. All information fields associated to a cardholder
   b. Bar code
   c. Text zone
   d. Start date, expiry date, today’s date
   e. Saved images and logos
   f. Borders
   g. Rectangles (including rounded rectangles, ellipse)
   h. Lines and arrows
   i. Photograph (can be cropped)
   j. A background

5. The operator shall be able to search for a card by last or first name, card creation date, card number, or any of the ten fields of user definable information. The system shall display the last card transactions, namely the latest sixteen denied
access events, authorized events, database events, and/or time & attendance events.

6. The SMS shall enable the creation of an unlimited number of Import/Export models, give them a name, select required fields, select their layout, and determine the file delimiter. This shall allow for acceleration of the data entry process by importing databases from a spreadsheet.

7. The SMS shall allow for 250 access levels programmed per site. Every card shall be assigned an access level per site which shall determine where and when the access card will be valid. When the system consists of several sites, it shall be possible to use batch programming of access levels.

8. The SMS shall allow for creation of tenant lists that can be imported in the (Kantech Telephone Entry System) KTES units. The lists shall be easy to fill up and allow for up to 3000 tenants in each list. The SMS shall support the creation of unlimited amounts of tenant lists.

9. The SMS shall allow importing and exporting of tenant lists. The operator shall have the ability to choose which fields to import and export.

10. The following tenant information shall be able to be saved for each tenant.

   a. Tenant name
   b. Tenant ID (customizable in length per tenant list)
   c. Primary Telephone Number
   d. Secondary Telephone number
   e. Tenant PIN (customizable in length per tenant list)
   f. Pin access schedule
   g. Tenant level
   h. Tenant language
   i. Card number
   j. Disable card trace
   k. Start/End date

11. The SMS shall allow for a card number to be assigned to specific tenant. The KTES unit will be able to send the card number to other controllers of a Wiegand protocol.

2.4.B Definition Section

1. The SMS shall allow the creation of 100 schedules per site and each schedule can include up to 4 intervals. A schedule can be associated with a supervision point, a relay, an access level, a door, an operator or an event. The SMS shall allow time zone management.

2. The SMS shall allow the creation of 366 holidays. It shall be possible to define a name, define a date and determine the type. The SMS shall allow the operator to view all the holidays defined in holiday type and sites by viewing them all in a yearly calendar.

3. The SMS graphics shall enable operators to view the exact location of a component installed at the site, or the state of components and peripherals represented in the graphic such as doors, contacts, motion sensors, and controllers. The SMS shall allow for the creation of an unlimited number of graphics. The components on the graphics represented by icons as well as the graphics themselves shall have the
ability to be modified. The SMS shall allow for printing of the graphics with their respective components on the graphical floor plan.

2.4.C Devices Section

1. The physical components of the SMS including the workstation, controllers, KTES (Kantech Telephone Entry System), doors, relays, and monitored inputs shall be individually configured and defined. Individual sites shall also be defined. The software shall allow the use of a controller Express Setup feature in order to minimize the time needed for controller definition.

2.4.D Alarm Interface

1. The SMS shall allow interface with any external alarm system thereby arming or disarming the system by presenting a valid card to an entry / exit door. It also shall be possible to associate a keypad with a reader forcing the cardholder to enter a number in the keypad after presenting a card. It shall be possible at a minimum to:
   a. Set a monitored input as an arming button
   b. Associate a usage schedule with an arming button
   c. Set the exit and entry delay
   d. Determine whether the system must wait for a valid access to arm
   e. Determine whether the door must relock on arming request
   f. Associate a monitored input with an alarm panel condition
   g. Lock a door unlocked by schedule when armed

2.4.E Intrusion Integration

1. The SMS shall allow interface with the DSC PowerSeries® intrusion panel thereby eliminating hardwired integration between the SMS controllers and the DSC PowerSeries® intrusion panel. The DSC PowerSeries® intrusion panel shall communicate with the Corporate gateway via rs-232 or directly to a KT-400 controller. The SMS shall allow for:
   a. Single / multiple partition arming and disarming via reader
   b. Single / multiple partition arming and disarming via operator commands
   c. Receive events from intrusion panel
   d. Receive partition names, user codes and zone names programming.
   e. Update user codes
   f. Assign user codes to cardholders

2.4.F System Section

1. The SMS shall define the profile of a system operator based on name, password, language, privileges, login schedule, security level, workspaces, and password expiry date.

2. The SMS shall determine access rights granted to an operator based on security levels. There shall be three predefined access levels called Installer, Administrator, and Guard. The SMS shall have the ability to create an unlimited number of security levels that can be assigned to one or more operators. It shall be possible to determine from which system components the operator shall be authorized to receive events and take action. It shall be possible to specify for each programming window if the operator can (any combination):
   a. View the component in read only
   b. Add new components
c. Modify existing components (cannot add new)
d. Delete components
e. Save as
f. Print components
g. View links

3. The SMS shall allow System Administrators to grant or deny operators access to system physical components using Workspaces. System administrators shall be able to tailor specific system application Workspaces, therefore restricting access to information to all levels of operators. Operators shall be able to use temporary workspaces to narrow their fields of view when accomplishing specific tasks, and then easily revert back to their main workspace.

4. The SMS shall allow for the creation of unlimited instructions. These instructions shall be attributed to one or more events that will be used in documenting the event and guide the operator on duty in performing tasks. It shall be possible to edit the instructions in two different languages.

5. The SMS shall make it possible to customize system events. All events shall be predefined to display on the system workstation. For each event it shall be possible to:
   a. Determine a display schedule
   b. Determine a color
   c. Assign a printer
   d. Associate an instruction
   e. Associate a schedule for an acknowledgement request
   f. Determine the priority level

2.4.G Report Section

1. The SMS shall include templates for various types of reports to include the following:
   a. Card use reports
   b. Manual operations reports
   c. Alarm reports
   d. Historical reports
   e. Time & Attendance reports
   f. Detailed reports
   g. Summary reports
   h. Statistical reports

2. The SMS shall allow for the creation of custom reports based on any event or component in the system. The SMS shall support an unlimited amount of customized reports.

3. All reports shall be able to be displayed on screen, printed, or sent by e-mail on a daily, weekly, or monthly basis. All event reports can be automated to be generated and sent at a specific time for a specific time frame.

4. The SMS shall support at a minimum the following report formats: Paradox, Dbase IV, CSV, XLS, PDF, RTF and TXT.

5. The SMS shall be able to generate an access report in CSV with all the card information associated to that access event.
2.4.h Options Section

1. The SMS shall allow operators to access basic server and display functions and allow the operator to determine default settings for the server hard drive. The operator shall also be able to determine the time to perform a server backup, programmable on monthly, weekly or daily basis. It shall be possible to schedule and plan masse automatic KT-400 firmware updates.

2.4.i System Status Section

1. The SMS shall allow operators to view the state of various access system components in text or numerical form. A specific controller’s state shall also be able to be viewed in graphic form via the picture of the controller with the status of each terminal. Database status shall also be able to be displayed.

2.4.j Various Tools

1. The SMS shall employ an Express Setup to configure system components such as sites and controllers, as well as peripherals associated to these components such as ports and inputs. This utility will reduce the programming time to a minimum.

2. The SMS shall employ a database utility to allow the re-indexation and verification of archived files and verify the integrity of indexes, links and database arborescence.

3. The KT-Finder tool shall help troubleshoot the IP Link or KT-400 on site or remotely. It can also be used as an alternate method of configuration.

4. The SMS shall include a vocabulary editor to be used in designing custom language dictionaries.

2.5 OPERATION

The SMS shall perform the following tasks:

1. Allow card access management for one or more buildings.

2. Control access to various doors equipped with a card reader.

3. Ensure more secure control with the anti-passback control function.

4. Monitor all defined alarm points as well as all doors controlled by card readers based on programmed schedules.

5. Send transactions for which printing is required to a printer, based on a set schedule.

6. Access the system using the main and secondary menus (to which access is limited by a password) to make additions and required changes to various data files so that they can be updated by the user without the manufacturer’s assistance.

7. Enable the entry of access code data for every card or group of cards.

8. Automatically display all alarms on screen in text with optional graphic or picture and trigger a sound requiring an acknowledgement on the keyboard to stop the alarm.
9. Each event should print on a log printer. For security reasons, each event shall be incremented with a print number. Numbering shall start from 0 every day.

10. Generate reports and view them on the screen, output them to a printer, or send them to an email address.

11. Supervise based on programmed schedules of specific points such as door contacts, volumetric detectors, mechanical points, high and low temperature sensors, or any other equipment necessary for good building management.

12. Save the database manually or automatically backup following a schedule.

13. Uninterrupted backups. The operator shall be able to perform any task during a SMS backup.

14. Save events on a hard drive according to required criteria.

15. Perform the following operations from all workstations:
   a. Lock or unlock one door or a group of doors;
   b. Activate or deactivate a relay or a group of relays;
   c. Activate or deactivate a point or a group of points;
   d. Program or modify one card or a group of cards;
   e. Validate or invalidate one card or a group of cards;
   f. Change time and date;
   g. Demand the system state in text or graphic mode;
   h. Query, create and/or modify data on: Access levels, Schedules and holidays, Access card, Instructions, Reports and log, Doors, Supervision points and relays, Operator levels, and Graphics

2.6 EQUIPMENT

2.6.A Workstation Requirements

The SMS workstation shall meet the following minimum requirements:

1. The workstation shall have an Pentium IV processor, 1.8 GHz or better
2. The workstation shall have a 500-watt power unit
3. The workstation shall have 512 MB RAM.
4. The workstation shall have 10 GB hard disk drive space
5. The workstation shall have a 48xCD / DVD ROM drive
7. The workstation shall have a 10/100/1000 Base-T network adapter
8. The workstation shall have a high quality multilingual keyboard
9. The workstation shall have a two button ergonomic mouse
10. The workstation shall have 32 MB graphic adapter card
11. The workstation shall have a 17” color monitor
12. The server shall have an appropriate UPS
2.6.B Controllers

The SMS shall support the following door controllers:

1. Kantech KT-400

The KT-400 is an Ethernet-ready four door controller with sixteen monitored points, on-board door strike power, sixteen reader outputs, four relay outputs, and auxiliary power output. It shall accept Wiegand, proximity, ABA clock and data, bar code, magnetic, integrated keypad, and smart card reader types. It shall also support FIPS 201 cards, with and without checking the expiration date. It supports RS-232, RS-485 and 128-bit AES Encrypted Ethernet 10/100Base-T communication. It supports expansion modules to provide 256 inputs and 256 outputs. It shall support 136 double end of line inputs.

2. Kantech KT-300

The KT-300 is a two door controller with eight monitored points on-board expandable to sixteen, door strike power, auxiliary power output, and two auxiliary outputs. It shall accept Wiegand, proximity, bar code, magnetic, and integrated keypad reader types. It supports RS-232, RS-485, and Combus communication. It supports relay, input, and output expansion modules. The KT-300 is available in 128k and 512k memory versions.

3. Kantech KT-100

The KT-100 is a one door controller with four monitored points, door strike power, and four auxiliary outputs. It shall accept Wiegand, proximity, bar code, magnetic, and integrated keypad reader types. It supports RS-485 communication.

4. Kantech KT-200 (Legacy)

2.6.C KTES (Kantech Telephone Entry System)

1. The KTES enables tenants to grant access to the building, to their visitors, via their own telephone line or cellular telephone. The KTES supports 125 tenants with the option of supporting up to 3000 tenants. The KTES also includes:
   - 4 lines x 20 characters LCD module with controllable LED backlighting
   - Programming menus available in three (3) languages (English, French and Spanish)
   - Built-in RS-485
   - 128-bit AES encrypted Ethernet
   - Internal modem
   - Three (3) relays
   - Microphone
   - Speaker
   - Backup battery

2. Optional KTES accessories are:
   - Heater kit
   - Postal lock
   - Color camera
   - Goose neck mounting
   - Paper index (flush mounted)
3. The KTES shall be programmed via the keypad and LCD for stand alone mode or via the SMS.

4. The unit shall support a Wiegand reader that will allow tenants to wipe their cards and enter the building.

5. The KTES shall employ flashable firmware with auto update.

2.6.D Card and Reader Support

1. The SMS shall support configuration of unlimited card formats.

2. The SMS shall support up to 2 card formats per controller (3 with DUAL ioProx driver).

3. The SMS shall support readers that provide Wiegand signaling and magnetic ABA signaling to include:
   a. Kantech ioProx family of readers
   b. Wiegand swipe readers
   c. Proximity readers
   d. Biometric readers
   e. Smart card readers
   f. Wireless readers
   g. Magnetic readers
PART III  EXECUTION

3.1 TESTING

1. The software shall be entered into the SMS computer systems and debugged. The Contractor shall be responsible for documenting and entering the initial database into the system. The Contractor shall provide the necessary blank forms with instructions to fill-in all the required data information that will make up the database. The database shall then be reviewed by the Contractor and entered into the system. Prior to full operation, a complete demonstration of the computer real-time functions shall be performed. A printed validation log shall be provided as proof of operation for each software application package. In addition, a point utilization report shall be furnished listing each point, the associated programs utilizing that point as an input or output and the programs which that point initiates.

2. Upon satisfactory on-line operation of the system software, the entire installation including all subsystems shall be inspected. The Contractor shall perform all tests, furnish all test equipment and consumable supplies necessary and perform any work as required to establish performance levels for the system in accordance with the specifications. Each device shall be tested as a working component of the completed system. All system controls shall be inspected for proper operation and response.

3. Tests shall demonstrate the response time and display format of each different type of input sensor and output control device. Response time shall be measured with the system functioning at full capacity. Computer operation shall be tested with the complete data file.

4. The Contractor shall maintain a complete log of all inspections and tests. Upon final completion of system tests, a copy of the log records shall be submitted as part of the as-built documentation.

3.2 TRAINING

The Contractor shall provide a competent trainer who has extensive experience on the installed systems and in delivering training to provide the instruction. As an alternate, the Contractor may propose the use of factory training personnel and coordinate the number of personnel to be trained.

3.3 MAINTENANCE

1. The Contractor shall offer a Kantech Advantage Program (KAP) to provide twelve additional months of free software updates and online training for the end user.

2. Technical support is available at no charge to all Kantech dealers whether or not they have a KAP activated for the systems they are supporting.

END OF SPECIFICATIONS